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ABSTRACT OF THE INVENTION

An *in vitro* system is provided that recapitulates regulated mRNA stability and turnover of exogenous RNA substrates. The system comprises a cell extract optionally depleted of activity of proteins that bind polyadenylate, and a target RNA sequence. This system is used for the identification of agents capable of modulating RNA turnover, as well as agents capable of modulating RNA turnover in the presence of RNA stability modifying agents.